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\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s biosensor? and current  
L1 10860 BIOSENSOR? AND CURRENT

=> s11 and plurality (3a) nucleic acid?  
SL1 IS NOT A RECOGNIZED COMMAND  
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=> s l1 and plurality (3a) nucleic acid?  
<-----User Break----->

SEARCH ENDED BY USER

=> s l1 and plurality (3a) (nucleic acid? or oligonucleotide?)  
3 FILES SEARCHED...  
L2 600 L1 AND PLURALITY (3A) (NUCLEIC ACID? OR OLIGONUCLEOTIDE?)

=> s l2 and measur? (3a) current  
L3 48 L2 AND MEASUR? (3A) CURRENT

=> dup rem l3  
PROCESSING COMPLETED FOR L3  
L4 48 DUP REM L3 (0 DUPLICATES REMOVED)

=> s l4 and plurality (3a) electrode?  
L5 8 L4 AND PLURALITY (3A) ELECTRODE?

=> d l5 bib abs 1-8

L5 ANSWER 1 OF 8 USPATFULL on STN  
AN 2005:158215 USPATFULL  
TI Method and **biosensors** for detecting macromolecular biopolymers  
IN Paulus, Christian, Weilheim, GERMANY, FEDERAL REPUBLIC OF  
Schindler-Bauer, Petra T., Vaterstetten, GERMANY, FEDERAL REPUBLIC OF  
PA Infineon Technologies AG, Munich, GERMANY, FEDERAL REPUBLIC OF (non-U.S.  
corporation)  
PI US 2005136423 A1 20050623  
AI US 2004-841413 A1 20040507 (10)  
RLI Continuation of Ser. No. WO 2002-DE4171, filed on 11 Nov 2002, UNKNOWN  
PRAI DE 2001-155892 20011114  
DT Utility

FS APPLICATION  
LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257, US  
CLMN Number of Claims: 33  
ECL Exemplary Claim: 1-25  
DRWN 8 Drawing Page(s)  
LN.CNT 1135

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method for detecting macromolecular biopolymers using a unit for immobilizing macromolecular biopolymers, in which the unit is provided with first molecules serving as capture molecules. The method includes the steps of bringing a sample into contact with the unit, it being possible for the sample to contain the macromolecular biopolymers, and the macromolecular biopolymers or the first molecules having a marking which is used to generate a detectable signal, binding macromolecular biopolymers contained in the sample to the capture molecules, thereby forming complexes comprising capture molecules and macromolecular biopolymers, exciting the emission of a signal by means of the marking, detecting the signal emitted by means of the marking, separating the complexes comprising capture molecules and macromolecular biopolymers, thereby altering the intensity of the emitted signal, and detecting the separation of the complexes comprising capture molecules and macromolecular biopolymers by means of the change in the intensity of the signal.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 8 USPATFULL on STN  
AN 2004:94706 USPATFULL  
TI Electrochemical detection of nucleic acid sequences  
IN Henkens, Robert W., Beaufort, NC, UNITED STATES  
O'Daly, John P., Carrboro, NC, UNITED STATES  
Wojciechowski, Marek, Cary, NC, UNITED STATES  
Zhang, Honghua, San Diego, CA, UNITED STATES  
Naser, Najih, Orlando, FL, UNITED STATES  
Roe, R. Michael, Apex, NC, UNITED STATES  
Stewart, Thomas N., Durham, NC, UNITED STATES  
Thompson, Deborah M., Raleigh, NC, UNITED STATES  
Sundseth, Rebecca, Durham, NC, UNITED STATES  
Wegner, Steven E., Chapel Hill, NC, UNITED STATES  
PI US 2004072158 A1 20040415  
AI US 2002-82714 A1 20020225 (10)  
RLI Division of Ser. No. US 2000-549853, filed on 14 Apr 2000, GRANTED, Pat. No. US 6391558 Continuation-in-part of Ser. No. US 1998-44206, filed on 17 Mar 1998, ABANDONED  
PRAI US 1997-40949P 19970318 (60)  
DT Utility  
FS APPLICATION  
LREP Atten. Gregory A Nelson, Akerman Senterfitt, Suite 400, 222 Lakeview Avenue P O Box 3188, West Palm Beach, FL, 33402-3188  
CLMN Number of Claims: 21  
ECL Exemplary Claim: 1  
DRWN 20 Drawing Page(s)  
LN.CNT 4480

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrochemical detection system which specifically detects selected nucleic acid segments is described. The system utilizes biological probes such as nucleic acid or peptide nucleic acid probes which are complementary to and specifically hybridize with selected nucleic acid segments in order to generate a **measurable current** when an amperometric potential is applied. The electrochemical signal can be quantified.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 8 USPATFULL on STN  
AN 2004:70063 USPATFULL  
TI Devices and methods for biochip multiplexing  
IN Terbrueggen, Robert Henry, Hermosa Beach, CA, UNITED STATES

Blackburn, Gary F., Glendora, CA, UNITED STATES  
Chason, Marc Kenneth, Schaumburg, IL, UNITED STATES  
Dai, Xunhu, Gilbert, AZ, UNITED STATES  
Eliacin, Manes, Buffalo Grove, IL, UNITED STATES  
Grodzinski, Piotr, Santa Fe, NM, UNITED STATES  
Irvine, Bruce Duncan, Glendora, CA, UNITED STATES  
Kayyem, Jon Faiz, Pasadena, CA, UNITED STATES  
Lian, Keryn Ke, Palatine, IL, UNITED STATES  
Liu, Robin Hui, Chandler, AZ, UNITED STATES  
O'Rourke, Shawn Michael, Tempe, AZ, UNITED STATES  
Sheldon, Edward Lewis, III, Arcadia, CA, UNITED STATES  
Zenhausern, Frederic, Fountain Hills, AZ, UNITED STATES

PI US 2004053290 A1 20040318  
AI US 2003-412660 A1 20030411 (10)  
RLI Continuation of Ser. No. US 2002-193712, filed on 11 Jul 2002, ABANDONED  
Continuation-in-part of Ser. No. US 2001-904175, filed on 11 Jul 2001,  
PENDING Continuation-in-part of Ser. No. US 2001-993342, filed on 5 Nov  
2001, PENDING Continuation-in-part of Ser. No. US 2001-760384, filed on  
11 Jan 2001, PENDING Continuation-in-part of Ser. No. WO 2001-US44364,  
filed on 5 Nov 2001, PENDING Continuation-in-part of Ser. No. WO  
2001-US1150, filed on 11 Jan 2001, PENDING  
PRAI US 2000-175539P 20000111 (60)  
US 2000-245840P 20001103 (60)  
DT Utility  
FS APPLICATION  
LREP DORSEY & WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT, 4 EMBARCADERO  
CENTER, SUITE 3400, SAN FRANCISCO, CA, 94111  
CLMN Number of Claims: 14  
ECL Exemplary Claim: 1  
DRWN 52 Drawing Page(s)  
LN.CNT 6000  
AB The invention is directed to devices that allow for simultaneous  
multiple biochip analysis. In particular, the devices are configured to  
hold multiple cartridges comprising biochips comprising arrays such as  
nucleic acid arrays, and allow for high throughput analysis of samples.

L5 ANSWER 4 OF 8 USPATFULL on STN  
AN 2003:294281 USPATFULL  
TI Nanoparticles having oligonucleotides attached thereto and uses therefor  
IN Park, So-Jung, Austin, TX, UNITED STATES  
Taton, Thomas Andrew, Little Canada, MN, UNITED STATES  
Mirkin, Chad A., Wilmette, IL, UNITED STATES  
PI US 2003207296 A1 20031106  
AI US 2002-266983 A1 20021008 (10)  
RLI Continuation-in-part of Ser. No. US 2001-8978, filed on 7 Dec 2001,  
PENDING Continuation-in-part of Ser. No. US 2001-927777, filed on 10 Aug  
2001, PENDING Continuation-in-part of Ser. No. US 2001-820279, filed on  
28 Mar 2001, PENDING Continuation-in-part of Ser. No. US 2001-760500,  
filed on 12 Jan 2001, PENDING Continuation-in-part of Ser. No. US  
2000-603830, filed on 26 Jun 2000, GRANTED, Pat. No. US 6506564  
Continuation-in-part of Ser. No. US 1999-344667, filed on 25 Jun 1999,  
GRANTED, Pat. No. US 6361944 Continuation-in-part of Ser. No. US  
1999-240755, filed on 29 Jan 1999, ABANDONED Continuation-in-part of  
Ser. No. WO 1997-US12783, filed on 21 Jul 1997, PENDING  
PRAI US 2001-327864P 20011009 (60)  
US 2000-254418P 20001208 (60)  
US 2000-255236P 20001211 (60)  
US 2001-282640P 20010409 (60)  
US 2000-224631P 20000811 (60)  
US 2000-192699P 20000328 (60)  
US 2000-254392P 20001208 (60)  
US 2000-255235P 20001211 (60)  
US 2000-176409P 20000113 (60)  
US 2000-213906P 20000626 (60)  
US 2000-200161P 20000426 (60)  
US 1996-31809P 19960729 (60)  
DT Utility

FS APPLICATION  
LREP MCDONNELL BOEHNNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE  
3200, CHICAGO, IL, 60606  
CLMN Number of Claims: 677  
ECL Exemplary Claim: 1  
DRWN 75 Drawing Page(s)  
LN.CNT 12981

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 8 USPATFULL on STN  
AN 2003:127030 USPATFULL  
TI Nanoparticles having oligonucleotides attached thereto and uses therefor  
IN Mirkin, Chad A., Wilmette, IL, UNITED STATES  
Letsinger, Robert L., Wilmette, IL, UNITED STATES  
Taton, Thomas Andrew, Little Canada, MN, UNITED STATES  
Lu, Gang, Mt Prospect, IL, UNITED STATES  
PI US 2003087242 A1 20030508  
AI US 2001-8978 A1 20011207 (10)  
RLI Continuation-in-part of Ser. No. US 2001-927777, filed on 10 Aug 2001,  
PENDING Continuation-in-part of Ser. No. US 2001-820279, filed on 28 Mar  
2001, PENDING Continuation-in-part of Ser. No. US 2001-760500, filed on  
12 Jan 2001, PENDING Continuation-in-part of Ser. No. US 2000-603830,  
filed on 26 Jun 2000, PENDING Continuation-in-part of Ser. No. US  
1999-344667, filed on 25 Jun 1999, GRANTED, Pat. No. US 6361944  
Continuation-in-part of Ser. No. US 1999-240755, filed on 29 Jan 1999,  
ABANDONED Continuation-in-part of Ser. No. WO 1997-US12783, filed on 21  
Jul 1997, UNKNOWN  
PRAI US 1996-31809P 19960729 (60)  
US 2000-176409P 20000113 (60)  
US 2000-192699P 20000328 (60)  
US 2000-200161P 20000426 (60)  
US 2000-213906P 20000626 (60)  
US 2000-224631P 20000811 (60)  
US 2000-254392P 20001208 (60)  
US 2000-254418P 20001208 (60)  
US 2000-255235P 20001211 (60)  
US 2000-255236P 20001211 (60)  
US 2001-282640P 20010409 (60)

DT Utility  
FS APPLICATION  
LREP MCDONNELL BOEHNNEN HULBERT & BERGHOFF, 300 SOUTH WACKER DRIVE, SUITE  
3200, CHICAGO, IL, 60606  
CLMN Number of Claims: 626  
ECL Exemplary Claim: 1  
DRWN 71 Drawing Page(s)  
LN.CNT 12308

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have

sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 8 USPATFULL on STN  
AN 2002:314658 USPATFULL  
TI Devices and methods for biochip multiplexing  
IN Doung, Hau H., Los Angeles, CA, UNITED STATES  
Blackburn, Gary, Glendora, CA, UNITED STATES  
Kayyem, Jon F., Pasadena, CA, UNITED STATES  
O'Connor, Stephen D., Pasadena, CA, UNITED STATES  
Olsen, Gary T., La Crescenta, CA, UNITED STATES  
Pietri, Robert, Pasadena, CA, UNITED STATES  
Swami, Nathan, South Pasadena, CA, UNITED STATES  
Terbrueggen, Robert H., Manhattan Beach, CA, UNITED STATES  
PI US 2002177135 A1 20021128  
AI US 2001-904175 A1 20010711 (9)  
RLI Continuation of Ser. No. US 2001-760384, filed on 11 Jan 2001, PENDING  
Continuation of Ser. No. WO 2001-US1150, filed on 11 Jan 2001, UNKNOWN  
PRAI US 2000-175539P 20000111 (60)  
US 1999-145840P 19990727 (60)  
DT Utility  
FS APPLICATION  
LREP FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero  
Center, San Francisco, CA, 94111-4187  
CLMN Number of Claims: 23  
ECL Exemplary Claim: 1  
DRWN 42 Drawing Page(s)  
LN.CNT 5001

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to devices that allow for simultaneous multiple biochip analysis. In particular, the devices are configured to hold multiple cartridges comprising biochips comprising arrays such as nucleic acid arrays, and allow for high throughput analysis of samples.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 7 OF 8 USPATFULL on STN  
AN 2002:307830 USPATFULL  
TI Movement of biomolecule-coated nanoparticles in an electric field  
IN Mirkin, Chad A., Wilmette, IL, UNITED STATES  
Letsinger, Robert L., Wilmette, IL, UNITED STATES  
Mucic, Robert C., Glendale, CA, UNITED STATES  
Storhoff, James J., Evanston, IL, UNITED STATES  
Elghanian, Robert, Chicago, IL, UNITED STATES  
Taton, Thomas Andrew, Chicago, IL, UNITED STATES  
Garimella, Viswanadham, Evanston, IL, UNITED STATES  
Li, Zhi, Evanston, IL, UNITED STATES  
Park, So-Jung, Evanston, IL, UNITED STATES  
PI US 2002172953 A1 20021121  
AI US 2001-927777 A1 20010810 (9)  
RLI Continuation-in-part of Ser. No. US 2001-820279, filed on 28 Mar 2001,  
PENDING Continuation-in-part of Ser. No. US 2001-760500, filed on 12 Jan  
2001, PENDING Continuation-in-part of Ser. No. US 2000-603830, filed on  
26 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-344667,  
filed on 25 Jun 1999, GRANTED, Pat. No. US 6361944 Continuation-in-part  
of Ser. No. US 1999-240755, filed on 29 Jan 1999, ABANDONED  
Continuation-in-part of Ser. No. WO 1997-US12783, filed on 21 Jul 1997,

UNKNOWN  
PRAI US 1996-31809P 19960729 (60)  
US 2000-176409P 20000113 (60)  
US 2000-200161P 20000426 (60)  
US 2000-192699P 20000328 (60)  
US 2000-254392P 20001208 (60)  
US 2000-255235P 20001211 (60)  
US 2000-224631P 20000811 (60)  
DT Utility  
FS APPLICATION  
LREP Emily Miao, McDonnell Boehnen Hulbert & Berghoff, 32nd Floor, 300 S.  
Wacker Drive, Chicago, IL, 60606  
CLMN Number of Claims: 598  
ECL Exemplary Claim: 1  
DRWN 64 Drawing Page(s)  
LN.CNT 11435  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides methods of detecting a nucleic acid. The methods comprise contacting the nucleic acid with one or more types of particles having oligonucleotides attached thereto. In one embodiment of the method, the oligonucleotides are attached to nanoparticles and have sequences complementary to portions of the sequence of the nucleic acid. A detectable change (preferably a color change) is brought about as a result of the hybridization of the oligonucleotides on the nanoparticles to the nucleic acid. The invention also provides compositions and kits comprising particles. The invention further provides methods of synthesizing unique nanoparticle-oligonucleotide conjugates, the conjugates produced by the methods, and methods of using the conjugates. In addition, the invention provides nanomaterials and nanostructures comprising nanoparticles and methods of nanofabrication utilizing nanoparticles. Finally, the invention provides a method of separating a selected nucleic acid from other nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 8 USPATFULL on STN  
AN 2002:116060 USPATFULL  
TI Highly sensitive biological agent probe  
IN Megerle, Clifford A., Thousand Oak, CA, United States  
PA Lockheed Martin Corporation, Bethesda, MD, United States (U.S. corporation)  
PI US 6391624 B1 20020521  
AI US 2000-585549 20000602 (9)  
PRAI US 1999-137597P 19990603 (60)  
US 1999-154037P 19990916 (60)  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Whisenant, Ethan C.; Assistant Examiner: Lu, Frank  
LREP Venable, Aitken, Andrew C.  
CLMN Number of Claims: 18  
ECL Exemplary Claim: 1  
DRWN 7 Drawing Figure(s); 6 Drawing Page(s)  
LN.CNT 832

AB An improved biological probe is disclosed that employs a plurality of groups of modified single-stranded DNA attached to a single **electrode**. Using a **plurality** of such groups increases the inherent sensitivity of the probe by providing additional hybridization location sites and also serves to improve performance by diminishing steric hindrance caused by the crowding and tangling of the long single-stranded oligionucleotide molecules. The modification of the oligionucleotides involves the attachment of electron donor and acceptor moieties that alters the electrochemical properties of the hybridized molecules. The selected groups of modified oligionucleotides are complementary to unique characteristic sequences of the target DNA or RNA. A sample that containing oligionucleotides of a target biological agent is brought into contact with the probe and complementary portions of the molecules will hybridize with the oligionucleotides attached to the probe. When voltage is applied to the electrode, **current**

will flow through the hybridized molecules with little resistance.  
**Measurement** of the **current** or changes in the  
**current** within the probe will indicate the presence of target  
DNA or RNA.

=>